

# Generalized Green's Operators and the Method of Characteristics

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Symbolic methods for solving and manipulating linear ordinary boundary problems in the framework of integro-differential operators have been presented in several previous AADIOS sessions. In this talk, we apply the well-known method of characteristics to present a possible extension to PDEs by translating them to a family of parametrized ODEs. Although usually applied to first-order equations, the method of characteristics can be generalized to any hyperbolic PDE, and we will show in several examples how our algorithms for factoring boundary problems or for computing compatibility conditions and generalized Green's Operators of overdetermined boundary problems can be applied in this case.